Amendments to Claims:

This listing of claims will replace all prior versions and listings of the claims in the application:

Listing of Claims:

1. (currently amended) A digital device capable of recharging a rechargeable battery comprising;

a consuming current detect unit for detecting a consuming current input to the digital device;

a control unit for generating a control signal based on the consuming current and a battery recharging current;

a recharging current detect unit for detecting the battery recharging current as the battery is recharged; and

a recharging control unit for regulating the ~~consuming~~ current to the rechargeable battery in proportion to ~~a~~ the control signal output from the control unit and the battery recharging current detected by the recharging current detect ~~control~~ unit.

2. (original) The digital device capable of recharging a rechargeable battery according to claim 1, wherein the control signal includes a pulse width modulation signal.

3. (currently amended) The digital device capable of recharging a rechargeable battery according to claim 2, wherein the pulse width ~~module~~ modulation control signal has a duty ratio adjusted according to the consuming current detected by the consuming current detect unit.

4. (original) The digital device capable of recharging a rechargeable battery according to claim 1, wherein the consuming current detect unit comprises:

a first current detecting resistor for detecting the consuming current; and

a first operational amplifier, wherein a first end of the first current detecting resistor is coupled to an inverting input of the first operational amplifier and the second end of the first current detecting resistor is coupled to the non-inverting input of the first operational amplifier.

5. (previously presented) The digital device capable of recharging a rechargeable battery according to claim 1, wherein the recharging current detect unit comprises:

a second current detecting resistor;

a third current detecting resistor for detecting the rechargeable battery recharging current; and

a second operational amplifier, wherein a first end of the second current detecting resistor is coupled to a non-inverting input of the second operational amplifier and to the negative terminal of the rechargeable battery, and a first end of the third current detecting resistor is coupled to an inverting input of the second operational amplifier, and further wherein the second end of the second and third current detecting resistors are coupled together to earth ground.

6. (original) The digital device capable of recharging a rechargeable battery according to claim 1, wherein the recharging control unit comprises:

an integrator, an input of which is coupled to a first output of the control unit;

a third operational amplifier;

a fourth current detecting resistor; and

a transistor, wherein a first output of the integrator is coupled to a non-inverting input of the third operational amplifier, an inverting input of the third operational amplifier is coupled to an output of the recharging current detect unit, a first end of the fourth current detecting resistor is coupled to an output of the third operational amplifier and a second end of the fourth current detecting resistor is coupled to a first input of the transistor, a second input of the transistor is coupled to a power source, and an output of the transistor is coupled to a positive terminal of the rechargeable battery.

7. (original) The digital device capable of recharging a rechargeable battery according to claim 1, wherein the control unit includes a microprocessor.

8. (currently amended) A method for controlling recharging current of a rechargeable battery used in a digital device ~~to recharge current of a rechargeable battery~~

comprising:

detecting a consuming current input to the digital device;

detecting a battery recharging current as the battery is recharged; ~~and~~

generating a control signal based on said detected consuming current and said detected battery recharging current; and

regulating the recharging ~~consuming~~ current to the rechargeable battery in proportion to ~~a~~ the control signal and the detected battery recharging current.

9. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim 8, wherein the control signal is a pulse width modulation signal.

10. (original) The method for controlling recharging current of a rechargeable battery according to claim 8 further comprising:

adjusting the control signal according to the detected consuming current.

11. (original) The method for controlling recharging current of a rechargeable battery according to claim 8, further comprising:

displaying a recharging complete message if the recharging current equals a predetermined value.

12. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim 10, wherein the step of adjusting the control signal according to the detected consuming current comprises:

determining whether the magnitude of the consuming current increases or decreases; and

varying the ~~pulse width modulation signal duty cycle~~control signal in accordance with the increase or decrease of the magnitude of the consuming current.

13. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim ~~8~~9, further comprising:

outputting ~~a~~ the control signal according to a magnitude of the consuming current.

14. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim ~~8~~13, wherein the step of outputting ~~a~~ the control signal according to a magnitude of the consuming current comprises:

maintaining the pulse width modulation duty cycle substantially at a first constant for a first range of consuming current values;

maintaining the pulse width modulation duty cycle substantially at a second constant for a second range of consuming current values; and

varying the pulse width modulation duty cycle linearly from about the first constant to about the second constant, for a third range of consuming current values.

15. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim ~~13~~14, wherein the first constant is in the range of about 50 to about 60 percent duty cycle.

16. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim ~~13~~14, wherein the second constant is in the range of about 20 to about 30 percent duty cycle.

17. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim ~~13~~14, wherein the first range of consuming current values is in the range of at or about 0 milliamps to at or about 275 milliamps.

18. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim ~~13~~14, wherein the second range of consuming current values is in the range of about 950 milliamps to about 1200 milliamps.

19. (currently amended) The method for controlling recharging current of a rechargeable battery according to claim ~~13~~14, wherein the third range of consuming current

values is in the range of about 275 milliamps to about 950 milliamps.

20. (currently amended) A method for recharging a rechargeable battery in a digital device comprising:

determining whether ~~the battery~~ a voltage of the rechargeable battery is greater than 5 volts, and if so, determining that the battery is partially discharged and performing a recharge operation according to ~~the~~ a state of the digital device being used.

21. (currently amended) The method according to claim 20 wherein the step of performing a recharge operation according to ~~the~~ a state of the digital device being used comprises;

determining ~~the~~ a consuming current;

outputting a control signal according to the consuming current; and

supplying a ~~portion of the consuming~~ recharging current according to the ~~pulse width modulation~~ control signal to the rechargeable battery for recharging.

22. (original) The method according to claim 21 wherein the control signal includes a pulse width modulation signal.

23. (currently amended) The method according to claim 22 wherein the step of supplying a ~~portion of the consuming~~ recharging current according to the pulse width modulation control signal to the rechargeable battery comprises;

determining whether the ~~battery~~ recharging current is between approximately 1000 and 300 milliamps, and if so, illuminating an illumination device at least one time; and

determining if the recharging current reaches 300 milliamps within 12 hours, and if so, switching to a second recharge mode.

24. (currently amended) The method according to claim ~~22~~ 23 wherein the step of switching to a second recharge mode comprises:

charging the rechargeable battery for a first time period of substantially one hour at a

recharging current of less than or equal to 300 milliamps and illuminating the illumination device for substantially one hour; and

illuminating the illumination device continuously after the first time period has elapsed.

25. (currently amended) The method according to claim 21, further comprising:

determining that the ~~rechargeable~~ recharging current does not reach 300 milliamps within 12 hours, and checking the battery voltage; and

determining whether the voltage of the rechargeable battery ~~voltage~~ is greater than 7 volts, and if so, illuminating an illumination device continuously.

26. (currently amended) The method according to claim 25, further comprising:

determining that the voltage of the rechargeable battery ~~voltage~~ is less than or equal to 7 volts; and

displaying an error message and terminating the recharge.

27. (currently amended) The method according to claim 20, further comprising:

determining that the voltage of the rechargeable battery ~~voltage~~ is less than or equal to 5 volts; ~~and~~

~~charging~~ supplying a recharge current to the battery for approximately 2 seconds at about 80 milliamps; and

determining whether the voltage of the rechargeable battery ~~voltage~~ is more than 5 volts, and if so, performing a quick recharge, otherwise performing a trickle recharge.

28. (currently amended) The method according to claim 27, wherein performing the trickle recharge comprises:

supplying approximately 80 milliamps to the battery for approximately one-half hour and illuminating ~~the~~ an illumination device momentarily; and

determining whether the voltage of the rechargeable battery ~~voltage~~ is greater than approximately 5 volts after the approximately one half hour ~~after~~ of recharging, and if so, performing a recharge operation according to the state of the digital device being used.

29. (currently amended) The method according to claim 28 wherein the step of performing a recharge operation according to the state of the digital device being used comprises;

determining ~~the~~ a consuming current;

outputting a pulse width modulation control signal according to a magnitude of the consuming current; and

supplying a ~~portion of the consuming~~ recharging current according to the pulse width modulation control signal to the rechargeable battery for recharging.

30. (currently amended) The method according to claim 29 wherein the step of supplying a ~~portion of the consuming~~ recharging current according to the pulse width modulation control signal to the rechargeable battery comprises;

determining whether the ~~battery~~ recharging current is between approximately 1000 and 300 milliamps, and if so, illuminating an illumination device at least one time; and

determining if the recharging current reaches 300 milliamps within 12 hours, and if so, switching to a second recharge mode.

31. (currently amended) The method according to claim 30 wherein the step of switching to a second recharge mode comprises:

charging the rechargeable battery for a first time period of substantially one hour at a recharging current of less than or equal to 300 milliamps and illuminating the illumination device for substantially one hour; and

illuminating the illumination device continuously after the first time period has elapsed.

32. (currently amended) The method according to claim 28, further comprising:

determining that the ~~rechargeable~~ recharging current does not reach 300 milliamps within 12 hours, and checking the voltage of the rechargeable battery ~~voltage~~; and

determining whether the voltage of the rechargeable battery ~~voltage~~ is greater than 7 volts, and if so, illuminating an illumination device continuously.

33. (currently amended) The method according to claim 32, further comprising:

determining that the voltage of the rechargeable battery ~~voltage~~ is less than or equal to 7 volts; and

displaying an error message and terminating the recharge.

34. (currently amended) The method according to claim 27, further comprising:

determining that the voltage of the rechargeable battery ~~voltage~~ is less than or equal to approximately 5 volts within approximately one half hour; and

determining whether the recharge current is not more than approximately 30 milliamps for approximately 2 seconds, and if not, continuing to recheck the magnitude and duration of the trickle recharge and if so, displaying an error message and terminating the recharge.

35. (new) The method according to claim 12 wherein the control signal is a pulse width modulation signal and the step of varying the control signal comprises varying the duty cycle of the pulse width modulation signal.